

MOST IMMEDIATE / BY FAX



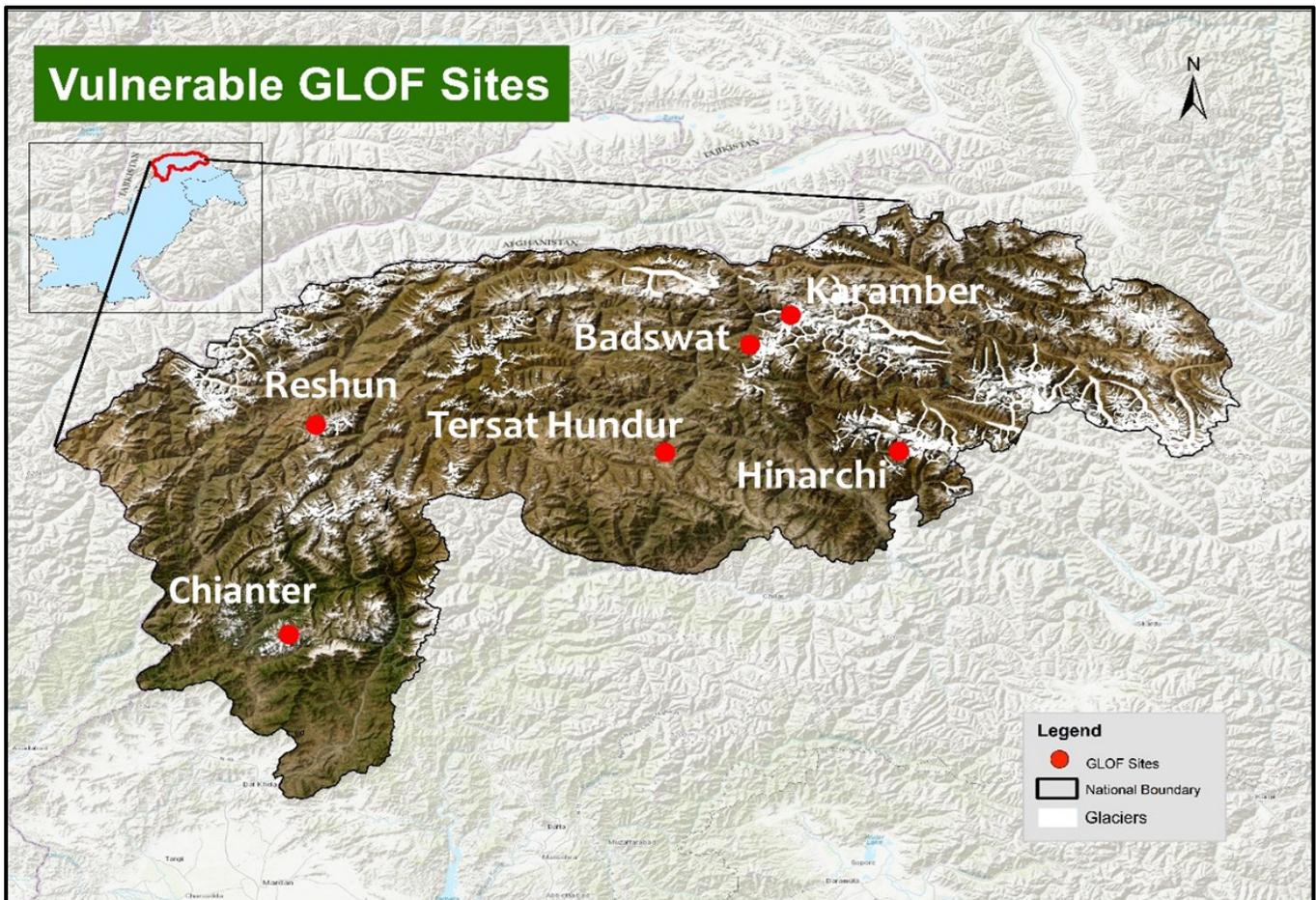
F.2 (E)/2024-NDMA (MW/GLOF-Alert-II)
Government of Pakistan
Prime Minister's Office
National Disaster Management Authority (HQ)
Main Murree Road, Near ITP Office, Islamabad



Dated: 21 May 2024

Subject: **GLOF ALERT – KHYBER PAKHTUNKHWA & GILGIT BALTISTAN**
Reference: NDMA Letter No. F.2(E)2024-NDMA (MW/Summer Guidelines) dated 17 May 24

GLOF Alert for **Khyber Pakhtunkhwa** and **Gilgit Baltistan** (enclosed as “**Annex-A**”) has been issued. **Rising temperatures** and **prevailing weather conditions** are expected to keep **Daytime Temperatures between 4-6°C Higher than Normal** and to bring **gusty winds / thunderstorms at isolated places from 21 May to 27 May 2024**. This combination could **significantly increase the flow in rivers and associated streams & nullahs, raising chances of GLOF Events, flash floods, landslides / mudslides**, in **vulnerable mountainous areas** of Khyber Pakhtunkhwa and Gilgit Baltistan (**NDMA GLOF Risk Projection Map** enclosed as “**Annex-B**”). Map outlining the **most vulnerable GLOF sites** in KP & GB is as below: -



2. In light of **prevailing weather conditions / situation** all concerned Federal Ministries / Departments, respective Provincial Governments, PDMA Khyber Pakhtunkhwa, Gilgit Baltistan Disaster Management Authority (GBDMA), Provincial Line Departments including Irrigation Departments, District Administrations / DDMA's and Municipal Administrations **are advised to ensure following along with any other measures deemed necessary:** -

- a. PDMA KP / GBDMA / Respective DDMA's to **undertake proactive monitoring and surveillance** of **vulnerable GLOF Sites** in order to **ensure timely early warning and response**.
- b. DDMA's to conduct **evacuation drills** in **at-risk communities** in order to **ensure full preparedness**.
- c. All civic agencies / rescue services (Rescue 1122 / Fire Brigade / Ambulance / Civil Defence) to **remain alert and ensure availability of personnel and equipment** during the forecasted period.
- d. **Mass awareness campaign for general public** on GLOF's in at-risk areas covering following aspects: -
 - (1) Avoid **unnecessary movement** in such areas, especially the discharge nullahs/ streams and rivers.
 - (2) Risk, consequences and danger of **washing away of vehicles** in fast-flowing water channels.
 - (3) **Alerting general masses living in low-lying areas** to exercise extra caution including community-based alert system.
 - (4) **Evacuation plan** of at-risk community and its timely evacuation.
- e. LEA's / Traffic Police **advise travelers regarding likely situations** / dangers and safety measures.
- f. NH&MP and Traffic Police to **coordinate** with **Law Enforcement Agencies** to **manage** and **redirect traffic** from affected areas to safer areas, to prevent congestion and facilitate emergency response efforts.
- g. PDMA KP / GBDMA / Respective DDMA's to ensure that **safe evacuation sites** are **fully stocked and ready for utilisation** in case of any eventuality.
- h. Preplace **necessary emergency equipment** at vulnerable / strategic locations to **expedite response efforts** and complete stocking / replenishment of stocks.

- i. Coordinate with concerned departments (NHA, FWO and C&W) for **restoration of roads** in case of any blockage / obstruction / closures and **preplacing of necessary emergency equipment** at vulnerable / strategic locations.
- j. Local Administration / Police / Rescue Services to **alert population residing in low lying areas**.
- k. Ensure **round the clock monitoring mechanism**/ arrangements through **all possible means / resources**, especially involving the local communities for immediate dissemination of early warnings.
- l. In-case of any eventuality, routine updates will be shared with NDMA.

3. **SUPARCO Analysis.** Regular **monitoring of all vulnerable GLOF sites** is being undertaken by **SUPARCO** and is **available on SUPARCO – SACRED Disaster Watch Portal**. Apropos, satellite imagery analysis of **Badswat GLOF Site on 20 May 2024** has been undertaken by **SUPARCO** and **has shown that a slight increase of 0.079 km² in lake size** has occurred between **14 February and 14 May 2024**. SUPARCO Imagery is included at **Annex-C**.

4. **Press Information Department (PID) Only.** With the request to ensure wider circulation and public awareness.

5. Forwarded for information / necessary action, please.



(Hammad Sadiq Rana)
Director (Response)
Tel No: 051-9030924
Fax No: 051-9030729

(**DISTRIBUTION LIST BELOW**)

DISTRIBUTION LIST

To: Chief Secretary, Government of Khyber Pakhtunkhwa, Peshawar
Chief Secretary, Government of Gilgit-Baltistan, Gilgit
Director General, PDMA Khyber Pakhtunkhwa, Peshawar
Director General, GBDMA Gilgit Baltistan, Gilgit
Director General, Rescue 1122 Khyber Pakhtunkhwa, Peshawar
Director General, Rescue 1122 Gilgit Baltistan, Gilgit
Chairman, National Highways Authority (NHA), Islamabad
Director (RAMS), National Highways Authority (NHA), Islamabad
Principal Information Officer, Press Information Department, Islamabad
General Manager (SACRED), SUPARCO, Islamabad
Headquarters, Frontier Works Organization (FWO), Rawalpindi
National Transmission & Dispatch Company, Islamabad
Headquarters, National Highways & Motorway Police (NH&MP), Islamabad
Headquarters, Force Commander Northern Areas (FCNA), Gilgit

Cc: Secretary to Prime Minister, PM Office, Islamabad
Secretary, Cabinet Division, Islamabad
Secretary, Ministry of Climate Change, Islamabad
Chairman Federal Flood Commission, Islamabad
Director General, Pakistan Meteorological Department (PMD), Islamabad
Joint Crises Management Cell, Joint Staff Headquarters, Chaklala
Military Operations Directorate (MO-4), General Headquarters, Rawalpindi

ID: PRO, NDMA
Deputy Director ICT, NDMA



Government of Pakistan
Ministry of Aviation (Aviation Division)
Pakistan Meteorological Department
Research and Development Division
Islamabad, Pakistan

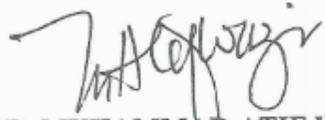
GLOF ALERT

GLOF/Met-3(7)/2020/ 2223

Dated: 20 May 2024
Issue Time: 4:00 PM

The daytime temperatures in Gilgit-Baltistan (GB) and Khyber Pakhtunkhwa (KPK) are expected to remain 04-06 °C higher than normal from May 21 to 27 with chances of gusty wind/thunderstorm is expected at isolated places. This atmospheric condition potentially increasing the likelihood of triggering a Glacial Lake Outburst Floods (GLOF) event or flash floods in the vulnerable snow-covered and glaciated areas of GB and Chitral.

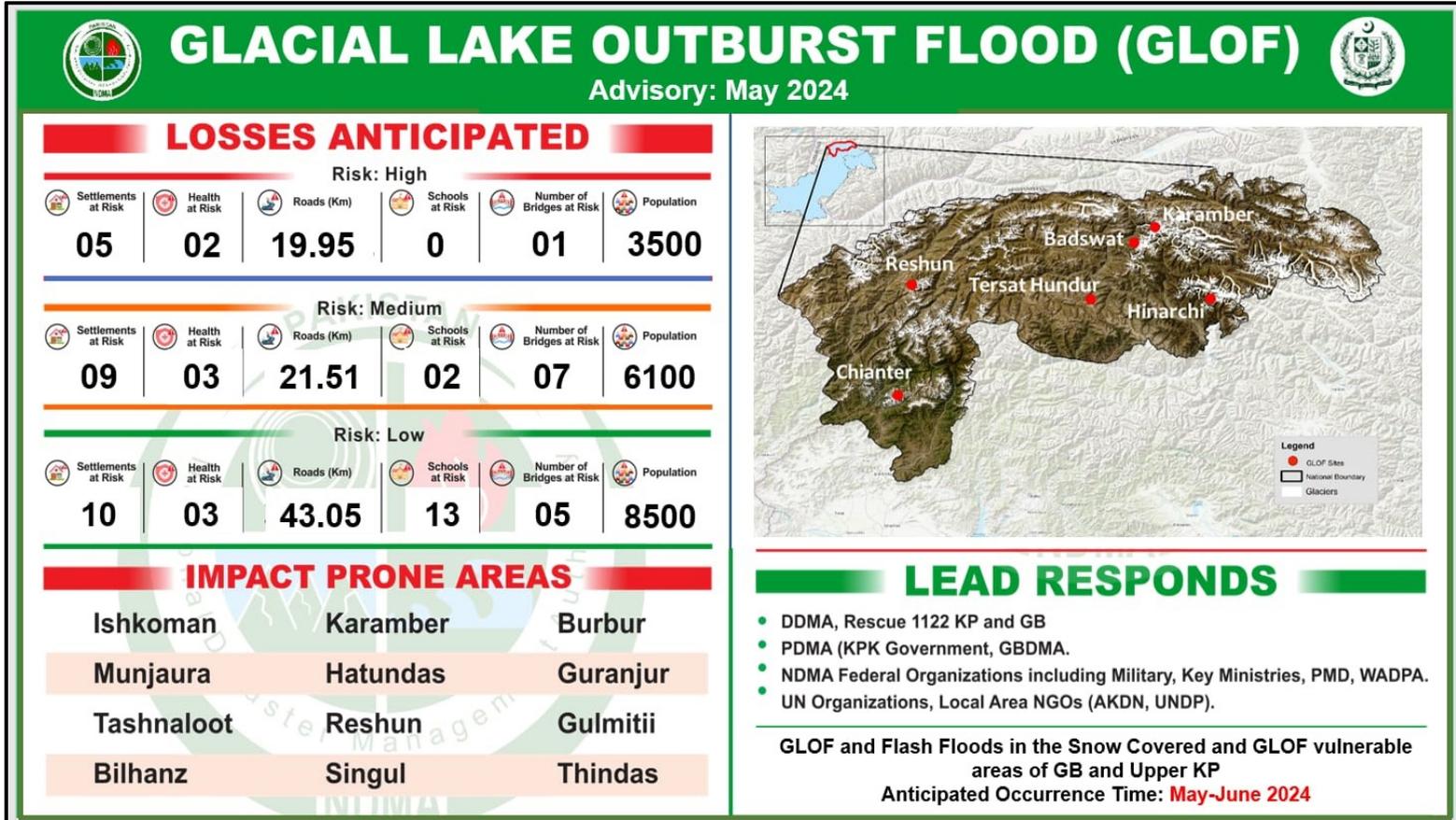
2. The district administration, relevant local organizations, and local communities are advised to remain vigilant and observe precautionary measures to avoid any untoward situations.


(DR. MUHAMMAD ATIF WAZIR)
Deputy Director,
For Director General, PMD

Distribution:-

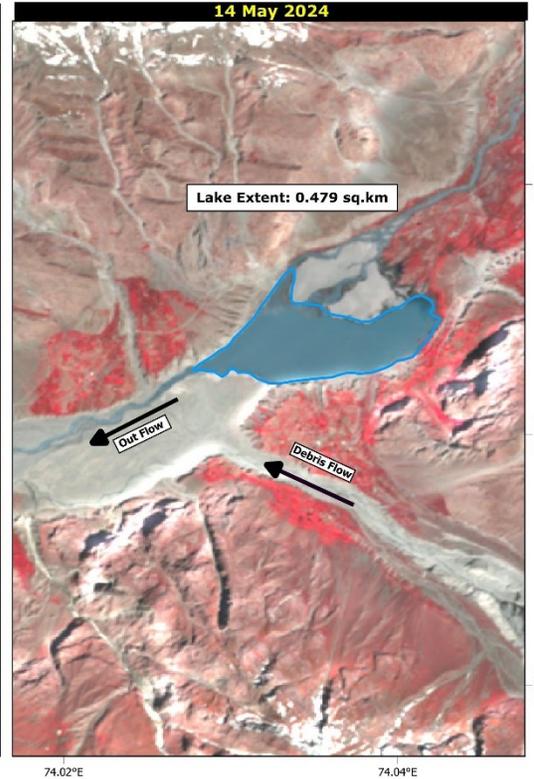
1. Chairman, National Disaster Management Authority (NDMA).
2. Director General, Gilgit-Baltistan Disaster Management Authority (GBDMA).
3. Director General, Provincial Disaster Management Authority, Khyber Pakhtunkhwa
4. National Project Manager, Pakistan GLOF-II Project, 6th Floor, Serena Hotel, Islamabad.
5. Project Coordinator, Pakistan GLOF-II, Gilgit-Baltistan.
6. Chairman, Rescue 1122, Gilgit
7. SPS to Director General, PMD
8. Director, RMC, Gilgit/ Peshawar. (To please dissemination further at District level)
9. Director, National Weather Forecasting Center (NWFC), PMD HQs
- ✓ 10. Web Master.

NDMA GLOF RISK PROJECTION MAP



SUPARCO SATELLITE IMAGERY ANALYSIS – BADSWAT GLOF SITE

**Monitoring of Badswat Glacial Lake
14 May 2024**



This map shows the updated situation of river blockage and lake formation due to landslide at Badswat, District Ghizer on 17 Jul 2018. Analysis indicates that the lake area on 24 Jun 2023, 14 Feb 2024 and 14 May 2024 was 0.774 sq.km, 0.40 sq.km and 0.479 sq.km respectively. The lake area has increased from Feb 2024 to May 2024. This analysis has been done using Pre-post imagery of Sentinel-2 satellite acquired on 24 Jun 2023, 14 Feb 2024 and 14 May 2024 respectively.

This analysis is yet to be validated in the field.

This map is generated at Space Applications Centre for Response in Emergency and Disasters (SACRED) on 20 May 2024.

